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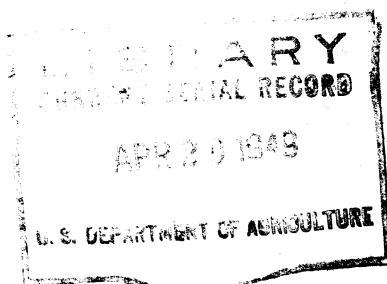
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Cotton Shirts

FOR MEN AND BOYS

Farmers' Bulletin No. 1837

U. S. DEPARTMENT OF AGRICULTURE



QUALITIES TO LOOK FOR IN BUYING SHIRTS

A good-quality business shirt has—

- ▶ Firm, smooth fabric with a high yarn count.
- ▶ All parts preshrunk.
- ▶ Permanent color.
- ▶ Design or pattern matched at collar, front pleat, pocket.
- ▶ Well-matched, flat, sharp collar points.
- ▶ Close, even stitches, about 20 to the inch.
- ▶ Even, clear, smooth, four-hole pearl buttons, sewed on with many stitches.
- ▶ Firm, neat buttonholes, large enough to slip over the buttons easily, made with highly mercerized thread.
- ▶ Full cut.

A good-quality work shirt has—

- ▶ Firmly woven, strong, smooth fabric with no sizing; high yarn count.
- ▶ All parts preshrunk.
- ▶ Permanent color.
- ▶ Close, even stitching, about 16 stitches to the inch.
- ▶ Triple-stitched seams.
- ▶ Pearl or composition buttons.
- ▶ Firm buttonholes.
- ▶ Neat collar and front pleat.
- ▶ Interlined collar.

Cotton Shirts

FOR MEN AND BOYS

by MARGARET SMITH, *Junior home economics specialist*

KEEP an eye on the details that stand for long, hard wear when you buy men's and boys' shirts. Shirts vary little in style—the problem is to choose the best in quality so the shirts will last a long time. To be sure of quality check the material, accuracy of cut, workmanship, comfort of fit.

Shirt Fabrics

The materials most commonly used for business shirts are broadcloth, oxford, madras, end-to-end madras, and a lightweight chambray. Percale is an in-between fabric, often chosen by office workers and by manual workers who may not require the ordinary type of work shirt.

Work-shirt materials should be strong and durable. They must be of a weight that is comfortable from the standpoint of warmth or coolness and of a textile suitable for the particular kind of work to be done. They should also be easy to wash clean. Some materials are difficult to wash free of dirt and so require a great deal of rubbing.

For outdoor work in mild weather, choose a material such as chambray, which is durable, firm enough to prevent sunburn, yet lightweight enough to admit air and be fairly cool. For cold weather, covert and other warmer cottons are good.

Khaki and jean are durable materials for heavy work shirts, but these, like covert, are not the easiest for home laundering. Flannel and suede cloth are also used widely in very cold climates.

Cotton or linen mesh fabrics, either woven or knitted, are popular for summer sport shirts because they are cool and easy to care for, but be sure that they will not shrink or stretch out of shape. Some are firmly con-

structed and will keep their original shape, while others cannot be worn after they are washed. Knitted fabrics of rayon are cool, but some of these materials stick to the iron when they are pressed and become shiny with wear.

Woven materials, like oxford cloth and slub broadcloth, are used in the more tailored types of sport shirts. These shirts look much like the regular business shirts when worn with a tie and coat.

Winter sport shirts are made of heavier and warmer materials, such as wool or cotton flannel or wool gabardine.

The quality of shirtings depends on the kind and grade of the fiber; the size, twist, and ply of the yarn; the number of yarns per inch both lengthwise and crosswise; the weave, breaking strength, and resistance to rubbing; the finish, amount of shrinkage, and color permanence. Much of this cannot be learned by looking at the material, but you can ask the buyer for definite facts in case the salesman is not sufficiently informed. Occasionally you can get some information from tags or labels on the shirt.

Long cotton fibers are used in the best shirting fabrics because they make the strongest, smoothest, and most even yarns. These fibers are usually combed to remove the short straggling ones, then spun into yarns. Two or more of these yarns twisted together form ply yarns. Cheaper shirt fabrics are generally made from short fibers, which are merely carded before spinning. The yarns are often uneven in size, and the fabric may have a fuzzy appearance.

Yarn count, the number of yarns per inch both in the warp and in the filling, is another item to consider in the quality of shirtings. The higher the count of yarn in a fabric, the finer the fabric. Materials with the lower yarn count are used in the cheaper shirts, and to make them look better until they are sold, starch and other finishing materials are often used as filling and dressing.

A firm, plain, smooth weave is the type to choose for long wear. Long floats or loose threads on the surface of the material, or fancy open weaves are apt to snag and pull and make the cloth weak. Even, short floats, such as are found in the tiny patterns in madras, wear out more quickly than the body of the fabric. Novelty shirtings, with designs, stripes, or checks of rayon, are hard to launder satisfactorily. The rayon is damaged by the high temperatures and bleaches generally used for cleaning cottons thoroughly and keeping them white.

Many of the better cotton shirtings are mercerized, which means that they have been subjected to a chemical process that strengthens the yarn and gives a smooth, lustrous finish. Mercerized cottons wear longer, have a greater affinity for dyestuffs, and do not show soil as readily as shirtings that are not so smooth. In cheap materials this finish is sometimes imitated by pressing, but any luster so obtained disappears in the first washing and leaves a dull-looking fabric.

Shirtings that feel smooth, silky, and firm are easy to launder and give a well-tailored appearance. If thick, harsh, and rough, they are hard to wash clean, difficult to iron, and always look wrinkled.

Shrinkage cannot be judged by looking at a fabric. You need to look for facts on labels. Many good- and medium-grade shirts have been submitted to a controlled shrinkage process. These shirts are usually cut a little larger than the stamped neck and sleeve size to allow for slight additional shrinkage. After laundering the measurements should be the same as the stamped size. Poor-quality shirts are rarely preshrunk, and no allowance is made for shrinkage. They may therefore not be wearable after they are laundered, unless bought very large in the first place. Even then good fit is not likely.

Some poor-grade covert and chambray work shirts shrink as much as 10 percent in one direction. These shirts will wear out more quickly than those of a better quality that have a guaranteed permanent size.

Read labels carefully. Recent rules established by the Federal Trade Commission require that such terms as "full shrunk" and "preshrunk" shall not be used in describing or labeling any cotton material unless the fabric will not shrink at all when laundered. If the material will shrink further, terms like "preshrunk" may be used only if qualified by an additional statement such as "will not shrink more than — percent." If a label says "full shrunk" without reference to any part of the shirt, the term should refer to the entire garment. If the label states "collar linings preshrunk," the body of the shirt has not necessarily been subjected to a shrinkage treatment. It may shrink badly.

Color permanence is an important point to look for in buying colored shirts. They should be fast to light, washing, and perspiration. Many shirts are labeled "vat dyed," which means that the color is fast to light and washing.

Broadcloth

Broadcloth, one of the most widely used shirtings, has a crosswise ribbed appearance. Most of the medium- and good-quality broadcloths are mercerized and made of combed, single-ply yarns. Such broadcloth usually has a yarn count of at least 130 yarns in the warp and 56 in the filling; this makes a fine, closely woven, durable fabric and one that tailors and launders well. Tests in this Bureau showed that shirt broadcloths of this type should have a breaking strength of at least 74 pounds in the warp and 24 pounds in the filling (grab method).



Some good-quality broadcloths are woven with two-ply yarns in both the warp and the filling; these are called two-ply broadcloths, or 2 by 2. They are very fine and soft, generally too fine for everyday wear, and are usually made up into high-priced shirts.

Low-grade broadcloths with lower yarn counts are made of carded single yarns. They are rarely mercerized; any luster they may have is due to heavy pressing and is not permanent. Some materials, called broadcloth, with a count below 100 by 52, do not have the characteristic ribbed appearance of broadcloth but may have a broken ribbed effect because of the unevenness of the yarns. Tests show that such fabrics are not as strong as the higher count broadcloths, will not give as good service, and lose their attractive appearance with laundering.

Oxford cloth is a mercerized basket-weave material, rather open in texture. It is an excellent wearing material and because of its open weave is widely used for summer sport shirts. It is particularly good for soft-collar shirts, and should not be starched. Oxford cloth is usually plain white, but may also have colored warp and white filling yarns, or it may be piece-dyed in solid colors.

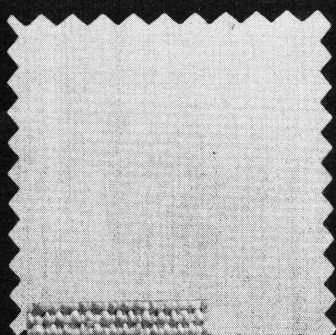
The yarn count of some typical oxford shirtings tested in this Bureau averaged 95 warp yarns and 45 filling yarns per inch, and ranged in breaking strength from 39 to 49 pounds in the warp and from 62 to 100 in the filling. The high strength of the filling yarns as compared with other fabrics may account for the good wearing qualities of this material.

Madras is identified by the woven-lengthwise stripes, in color or white. In selecting madras, be sure that the stripes are smooth and flat. If they are cordlike and form ridges, they will wear off long before the main part of the fabric. Madras sometimes has small, woven figures or designs which may wear out or snag. The best grades of madras are lightweight, smooth, and firm, and they tailor and launder well. The lower grades are harsh, coarse, and extremely hard to iron. Madras is usually a durable material.

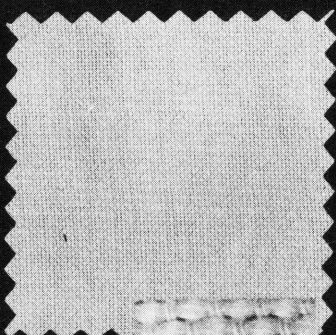
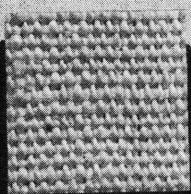
Results of studies on madras show an average yarn count of 117 in the warp and 75 in the filling and a range in breaking strength of from 40 to 87 pounds in the warp and 19 to 55 pounds in the filling.

Chambray is distinguished by the colored up-and-down yarns and the white crosswise ones, although the general effect is that of a solid color. It has a fairly well balanced weave with about the same number of yarns warpwise and fillingwise. The breaking strength, too, is nearly equal in both directions. Lightweight chambray is a good fabric for business and dress shirts, as it wears very well, and its smooth, soft texture makes it tailor and launder satisfactorily. The finely woven chambrays are found only in the better-grade business shirts.

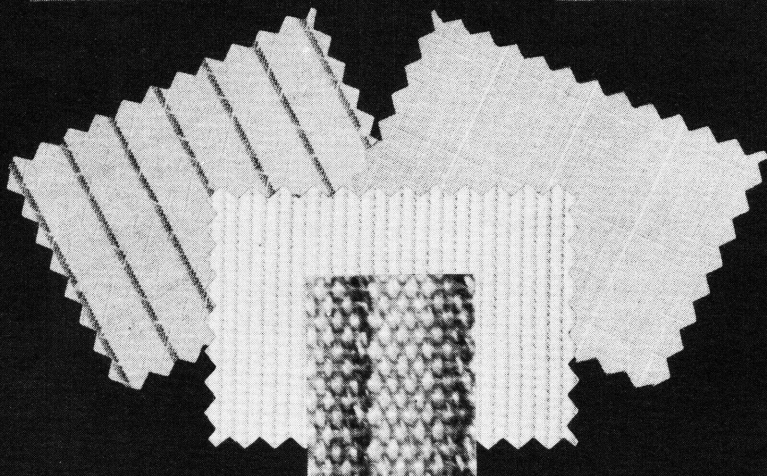
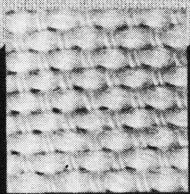
Chambray in heavier weights is a good fabric for work shirts. Of the heavier chambrays tested in this Bureau, the average yarn count was



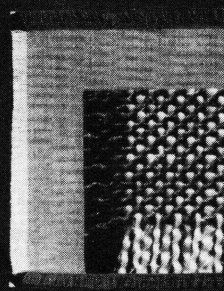
Broadcloth



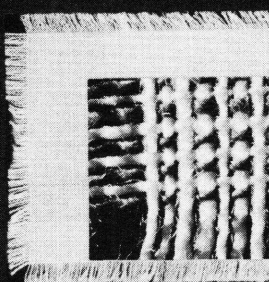
Oxford



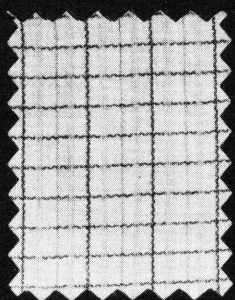
Madras



Chambray



End-to-end Madras



Percale

67 by 46; the breaking strength ranged from 49 to 76 pounds in the warp and 26 to 37 pounds in the filling.

End-to-end madras End-to-end madras is similar to lightweight chambray in appearance, and is often sold as chambray. The up-and-down yarns are alternately white and colored, instead of being all colored as they are in chambray. The filling yarns are white, and the finished effect is one of tiny all-over checks, instead of a solid color. This material is similar to chambray in weave and in wearing and laundering characteristics. Tests in this Bureau showed it to have a yarn count ranging from 84 to 127 warpwise and 71 to 112 fillingwise, and an average breaking strength of 48 pounds in the warp and 39 in the filling.

Percale Percale, a fabric often used in medium- and low-quality shirts, is a plain woven material with printed, rather than woven, designs. In better qualities it is firm and closely woven; it is easy to launder and gives good service. Since it is a printed fabric it is more likely to fade than are madras or chambray. When buying percale shirts, select those that are guaranteed fast color; otherwise they may turn white in spots. Good qualities of percale have an average yarn count of at least 80 by 80.

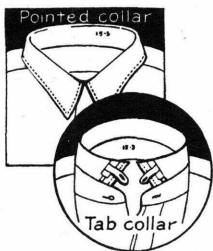
Covert Covert, another practical material for work shirts, is made of coarse yarns, two-ply in the warp, single-ply in the filling. It is firm, closely woven, heavy, and long wearing, but is much harder to launder than chambray. In the shirts of this material tested at the Bureau, the average yarn count was 54 by 47; the breaking strength ranged from 64 to 73 pounds in the warp, and 50 to 68 pounds in the filling.

Design and Workmanship

Even though somewhat uniform in appearance, men's shirts vary considerably in cut of such details as collar, cuffs, and back. These affect the comfort and the length of wear, and some styles are more becoming to one person than another. It is sometimes difficult to check on all these details, though, because of the many pins put into the shirt at the factory.

Collars and fronts Business or dress shirts are made with either attached or separate collars. Attached collars are convenient and comfortable, but they have two disadvantages. The whole shirt must be laundered when the collar is soiled, and when it becomes frayed the shirt has to be discarded unless a new collar can be attached. In that case ready-made collars can be purchased in white broadcloth; or fabrics can sometimes be matched at a shirt maker's or tailor's and the old collar used as a pattern.

Attached collars come in two styles—pointed and tab. Tab collars fit higher around the neck than the regular pointed styles and are usually kept in place by buttoned extensions or tabs. Some tab styles have loops



on the under side through which the tie is passed; this keeps the collar points from turning up and also keeps the tie down. On other styles, removable stays keep the points down.

Collars are made in different heights to suit long, average, or short necks. It is important to choose the right one, because collars of the right height wear better. A high collar on a short-necked man is uncomfortable and unbecoming and will wear out quickly because of the extra wear on the folded edge.

Collar points should be sharp, evenly stitched, and as flat as possible. If collar points are not well tailored they are unsightly, as well as hard to iron. They wear out quickly, too, because of the extra pressure needed in ironing them flat.

Look at the inside of the neck band. On most good-quality shirts you will find several rows of machine stitching, referred to in the trade as quilting. This keeps the neck band firm and prevents it from crushing down on the neck.

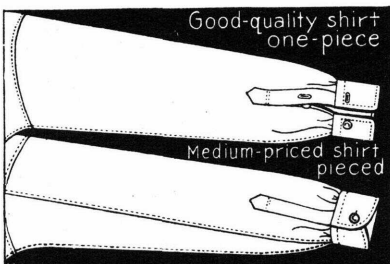
So-called "fused" collars have been treated by any one of several processes to give them a permanent starched appearance so that they will retain their stiffness even in warm weather and the collar points will stay down. Some of these collars are satisfactory; others wrinkle badly and wear out quickly. Since there is no way for a person to distinguish between them at the time of purchase, it is well to ask for a definite written guarantee.

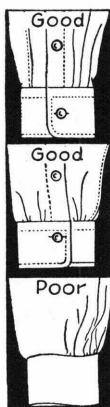
Most collars and front pleats are interlined and can be ironed smooth and flat only if the lining materials are as fully shrunk as the outer cloth. In poor-quality work shirts a sleazy interlining is often used which is likely to shrink badly.

Sleeves and cuffs

The top of the sleeve should come to the edge of the shoulder bone. If it drops down on the upper arm, the sleeve pulls and strains the back of the shirt. If it is too high on the shoulders, both sleeves and back are strained.

In the best-quality shirts, sleeves are cut in one piece and are easier to iron and are neater in appearance than if pieced. However, sleeves in medium-quality shirts are often pieced at the back of the arm to save material; this does not affect the fit as the sleeves are the same size as those cut in one piece. To be sure that the sleeve is cut straight, see that the thread of the material goes straight with the top fold of the sleeve. If the sleeve is cut crooked, it will be hard to iron flat.



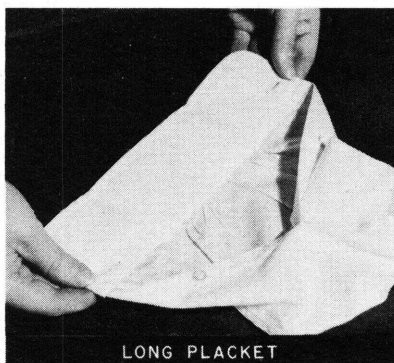


Work shirts often have a double section at the elbow, to stand the hard wear required of this type of shirt. These sections should follow the thread of the sleeve and should be applied as flat as possible, so that they will be easy to iron.

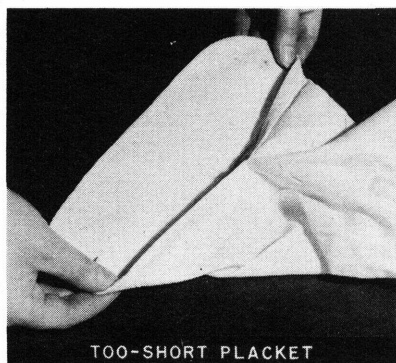
See that the sleeve fullness at the cuff is neatly distributed at the back, not bunched or uneven. Pleated fullness is the easiest to iron flat, but gathers are not difficult except when they are bunched together. Another type that is easy to iron is a specially cut sleeve that tapers into the cuff without pleats or gathers.

See that the sleeve placket opens wide enough for the cuff to be ironed flat. If it rolls up on the ironing board, it is hard to iron out all the wrinkles and get a neat finish. A button and buttonhole placed midway of the placket holds it together when worn, and makes the cuff stay straight and neat about the wrist. Unfortunately, many shirts do not have this good feature.

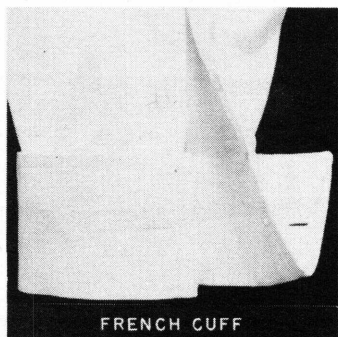
Plackets on work shirts, even those of good quality, are usually continuous, rather than tailored. On some of the poorest quality, the opening is simply part of the underarm seam and is merely hemmed. Such plackets are very likely to tear.



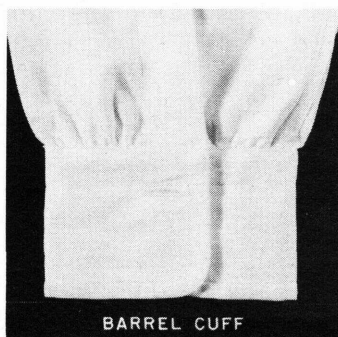
LONG PLACKET



TOO-SHORT PLACKET



FRENCH CUFF

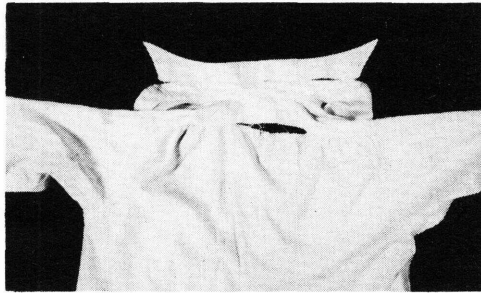


BARREL CUFF

Cuffs of business shirts are made in two styles—French, or double, which fasten with links, and single, or barrel, which button. French cuffs are tailored in appearance and fit neatly into a coat sleeve. They are harder to iron than the single type, but they can be turned when the edges fray and so worn for a longer time. Barrel cuffs button at the wrist, and fit more closely than the French cuffs. They are easy to iron and to fasten. In work shirts, the cuffs are always barrel style.

Cut of the back

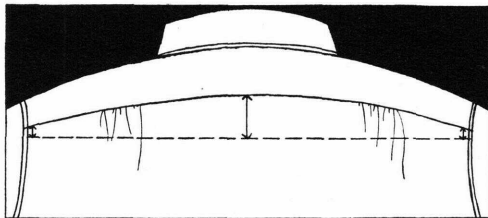
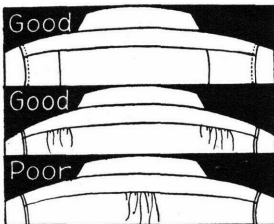
The cut of a shirt back is often overlooked, yet it has much to do with comfort and length of service, especially if a man is a bit round-shouldered or heavy in build. A full-cut back is always needed for free reaching, swinging the arms, and driving a car. This may be provided by a generous width allowance with the fullness eased to the yoke so that the finished effect is that of a plain back. Again, actual fullness as gathers or pleats may be set in over the shoulder blades. This places the fullness exactly where it is needed. If pleats or gathers are set in at the center back, they do little, if any, good.



A shirt cut straight across the back pulls out from the yoke.

In most well-cut shirts the edge of the shirt back that joins the yoke is rounded higher at the center back. This takes care of length needed by the natural rounding of the shoulder muscles. Shirt backs that are cut straight across the top, without this extra height, are too short and eventually tear away from the yoke.

Work shirts are cut in one piece in the back, with no separate yoke as in business shirts. A shaped section is applied to give the appearance of a yoke. Sometimes this yoke comes well down over the shoulder blades to serve as a reinforcement.



Shirt backs rounded high at the center and having evenly distributed gathers or pleats fit better over the shoulders.

Buttons and buttonholes

The buttons on the front of a good business or dress shirt are clear, lustrous, smooth pearl of uniform thickness, with the holes evenly spaced in the center. On cheaper shirts the buttons are generally of lower-grade pearl—cloudy, rough, uneven in thickness, often chipped, and with the holes off center. The rims of such buttons soon break off.

On good-quality shirts more stitches and more thread are used in sewing on the buttons; consequently, they stay on better. Buttons on starched fronts tear off more easily than if the front is soft, because starch makes the material and thread less pliable.

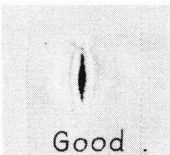
On the better grades of work shirts the buttons are generally of a durable composition. On medium-grade work shirts there are often bone buttons which, though they wear well, darken with laundering. Sometimes the buttons on poor-quality work shirts are of metal that rusts as soon as the paint wears off. Compressed paper buttons are used, too, but they lose their shape and firmness and soon have to be replaced.

Examine the buttonholes to be sure that they are firm and are securely stitched across each end. The ones on the front pleat should be placed exactly in the center.

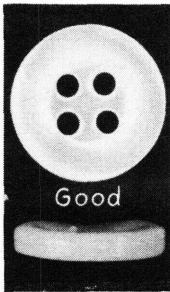
The fastenings are very important in sport shirts, as they are often of a type that will wear out before the shirt itself. If slide fasteners are used, care should be taken that the shirt is preshrunk; otherwise the fastener will buckle up and be too long for the opening, as the fastener will not shrink with the shirt.

Metal eyelets and ties are used frequently; the material should be firmly woven or knitted, so the eyelets will not pull out and ruin the shirt.

Braid loops and buttons are another type of fastening used on these shirts. Loops are often so fragile, though, that they pull out of the fabric.



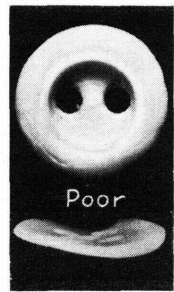
Good



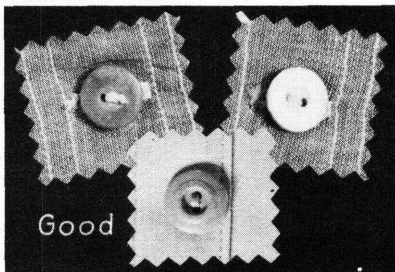
Good



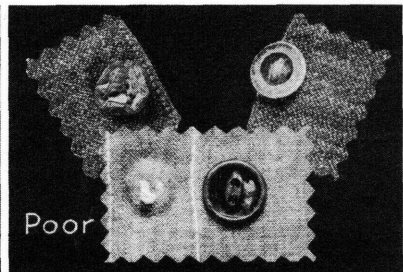
Poor



Poor



Good



Poor

Stitching and seaming

The outside stitching on the front pleat and the seamings on the sleeves and underarm are generally done with chain stitch. Examine the under side to see that the row of stitching is smooth, flat, and even. Knots in the stitching show careless workmanship and are usually found only on poor-quality shirts. The outside stitches should be small, of uniform size, and straight. In good-quality business shirts there are about 18 to 20 stitches to the inch; in work shirts, 12 to 16.

The stitching on the collar and cuffs of business shirts is generally the regular machine stitching, or lock stitching. The stitches should be small and even on both sides. Uneven stitches indicate a carelessly made shirt.

Boys' Shirts and Blouses

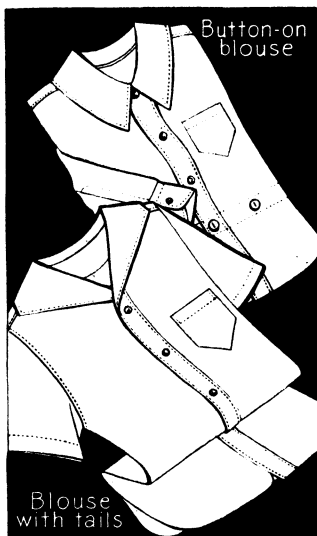
Boys' shirts and blouses are similar in many respects to those for men, but the best grade for boys usually corresponds to the medium quality for men. This is probably because boys outgrow their clothes so quickly that parents are loath to spend a great deal for them. There is the danger, however, that such economy may be carried so far that the shirts will not last as long as the boy could use them. Many times a good deal is spent on a quantity of cheap garments that cannot stand the necessary wear and tear. There would be greater satisfaction and saving if fewer shirts of better grade were bought in the first place.

The materials most used for boys' shirts are percale, broadcloth, and novelty cottons. Since growing boys need strong, well-fitting clothing, choose full-cut shirts made of firm, evenly woven materials that are full-shrunk and of permanent color. As in men's shirts, the fabrics with smooth finishes are easiest to launder.

Blouses for young boys are made either short and with buttons about the waist, or long and without buttons. In buying the button-on type be sure that the buttons at the waist are well reinforced with either strong tape or fabric, as they receive considerable strain. For most active school-age boys, blouses and shirts with tails are best, as they allow freedom for stooping without putting a strain on the shirt.

Shirts with open necks or convertible collars and short sleeves are tailored in appearance and comfortable for growing boys. These shirts are not outgrown so quickly as those with buttoned-up collars and long sleeves.

Youths' shirts are like men's in appearance, with pointed or tab collars and tailored fronts, but they do not have all the tailoring details of men's



shirts. Back fullness is concentrated at the center back; cuffs are usually barrel style and sleeve plackets generally continuous rather than tailored.

The buttons on boys' shirts are generally not so high in quality as those on men's shirts, but they should be uniform in thickness and have no flaws.

Sometimes metal eyelets and lacings are used as fastenings on boys' sport shirts. See that the material of these shirts is firmly woven and the eyelets securely clamped in. Otherwise they will pull out after a few wearings. If loops are used as fastenings, they should be easy to manage, and sewed securely into the seams to keep them from pulling out.

Size and Fit

If a shirt is the right size and fits properly, it will wear longer than if it is too small or is skimped in cut so that there is extra strain over the shoulders and at the tops of the sleeves. If the sleeves are too short, they will pull and eventually tear both the front and back of the shirt. A neck band that is too tight is not only uncomfortable but will also pull and strain the fabric below the neck band.

Shirts are sold according to the neck size and sleeve length. Both measurements are very important to the comfortable fit and trim appearance of the shirt. The neck sizes in regular shirts for men range from 14 to 18 inches, and the sleeve lengths from 32 to 36 inches. These measurements are stamped on the inside of the neck band, and sometimes on the lower left front. For instance, a shirt may be stamped "15-33," meaning that the neck size is 15 inches and the sleeve length 33 inches. Or sometimes the mark is shortened to "15-3" or "15-4", to indicate a sleeve length of 33 or 34 inches.

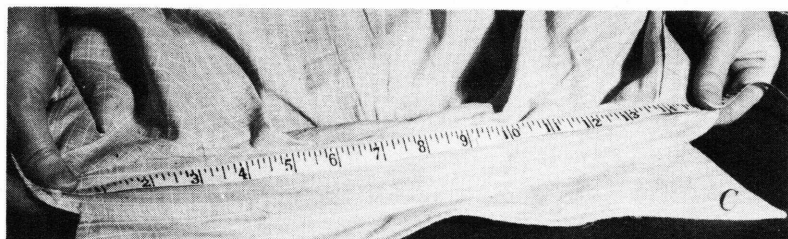
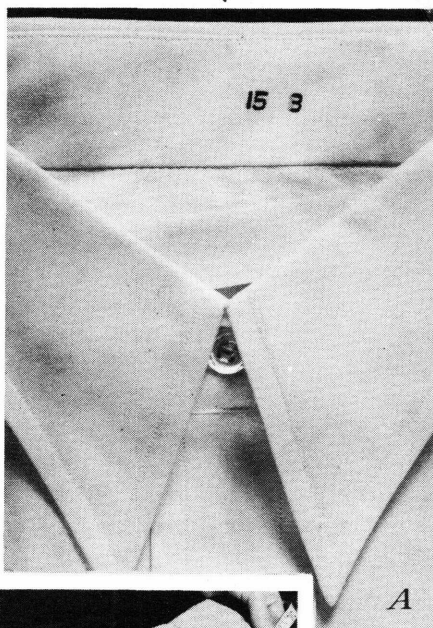
To be sure of getting the right size, measure a well-fitting old shirt. Lay the collar flat and measure the inside of the neck band from the center of the button to the far end of the buttonhole. For the sleeve length put the tape measure at the center of the back yoke and, laying the shirt out flat, measure to the lower edge of the cuff. If a new set of measurements has to be taken on the wearer, place the tape measure snugly where the collar usually rests, to get the neck size. For the sleeve length, measure from the prominent bone at the back of the neck to the wrist bone, with the arm extended straight out to the side.

A good-quality shirt will be full-cut. Measurements
Full cut for a full-cut shirt have been agreed upon by the trade and published by the National Bureau of Standards as a commercial standard. Labels carrying the inscription "Standard Government sizes" are misleading if interpreted to mean anything but this commercial standard, and should read "Standard commercial sizes."

Full-cut business or dress shirts are rounded at the tails, with back and front the same length. Some brands of shirts are made especially for slender men, and should not be confused with cheap skimped garments. The waist and sleeves are shaped to take out extra bulk that would be

A, The mark "15 3" stamped on the neck band indicates a neck size of 15 inches and sleeve length of 33 inches.

B and C, To get the right size measure by an old shirt. For the sleeve length put the tape measure at the center of the back yoke, and, laying the shirt out flat, measure to the lower edge of the cuff. Lay the collar flat and measure the inside of the neck band from the center of the button to the far end of the button-hole.

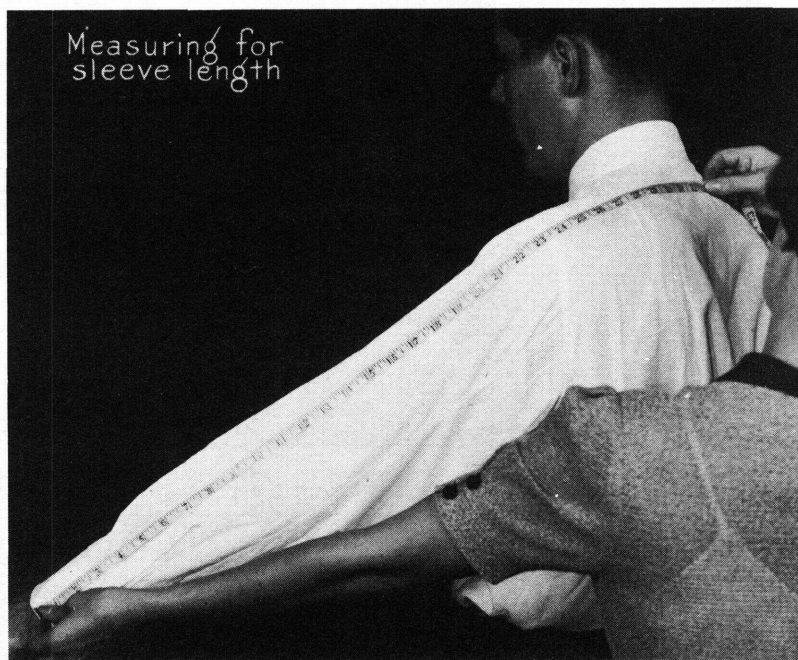


objectionable on this type of figure. Many large men also like these shirts because they find that they stay in place at the waist better than the fuller cut ones.

Work shirts are not usually cut as long as the business type of shirt, and the tails may not be shaped. Some work shirts are cut straight across the bottom, and some have tails with gussets.

Men of unusual build, who have difficulty in getting shirts that fit comfortably and give reasonable wear, will find greatest satisfaction in custom-made shirts. These are made according to individual measurements, and naturally such service must be included in the price. In the end, however, they probably cost less than ill-fitting shirts that have to be replaced frequently. To give the impression of quality, some manufacturers label their shirts "custombuilt," "custom features," "custom tailored," and the like, but on ready-made shirts these terms are meaningless. Only made-to-measure shirts can truthfully be called custom-made.

Shirts for boys and juniors are now marked according to age, rather than neck size. Youths' shirts are marked by the neck size, and sometimes by age as well. Sleeve length is not given in boys' or youths' shirts, even though it is important to the good fit of long-sleeved shirts. To get the best size, measure the neck, chest, and sleeve length on the boy. Old shirts are usually outgrown and cannot be used as a guide.



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